

# 3AW3

## Half-Wave Vacuum Rectifier

### Electrical:

	Min.	Av.	Max.	
Heater Characteristics and Ratings:				
Voltage (AC or DC) . . . . .	2.65	3.15	3.65	volts
Current at heater volts = 3.15. . .	-	0.220	-	amp
Direct Interelectrode Capacitance				
(Approx.): <sup>a</sup>				
P to (K+IS+H) . . . . .	-	1.5	-	pf

### Mechanical:

Operating Position. . . . .	Any
Type of Cathode . . . . .	Coated Unipotential
Maximum Overall Length. . . . .	3.625"
Seated Length . . . . .	3.000" to 3.250"
Diameter. . . . .	1.062" to 1.188"
Dimensional Outline . . . . .	See <i>General Section</i>
Bulb. . . . .	T9
Cap . . . . .	Small (JEDEC No. C1-1) or Small with Tubular Support (JEDEC No. C1-34)

### Bases (Alternates):

#### Intermediate-Shell Octal:

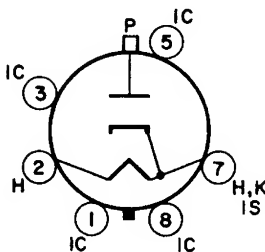
6-Pin, Arrangement 1 (JEDEC Group 1, No. B6-8)

#### Short Intermediate Shell Octal with External Barriers:

6-Pin, Arrangement 1 (JEDEC Group 1, No. B-6-60)

Basing Designation for BOTTOM VIEW. . . . . 3EZ

- Pin 1 - Do Not Use
- Pin 2 - Heater
- Pin 3 - Do Not Use
- Pin 5 - Do Not Use
- Pin 7 - Heater, Cathode,  
Internal Shield
- Pin 8 - Do Not Use
- Cap - Plate



### PULSED-RECTIFIER SERVICE

#### Maximum Ratings, Design-Maximum Values:

*For operation in a 525-line, 30-frame system<sup>b</sup>*

Peak Inverse Plate Voltage <sup>c</sup> . . . . .	30000 max.	volts
Peak Plate Current. . . . .	88 max.	ma
Average Plate Current . . . . .	1.7 max.	ma

<sup>a</sup> Without external shield.

<sup>b</sup> As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

<sup>c</sup> This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.



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6-64

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## OPERATING CONSIDERATIONS

*The high voltages at which the 3AW3 is operated are very dangerous.* Great care should be taken in the design of equipment to prevent the operator from coming in contact with these high voltages. Particular care against fatal shock should be taken in the measurement of heater voltage. Under all circumstances, circuit parts which may be at high potentials should be enclosed or adequately insulated.

*X-radiation.* The voltages employed in some television receivers and other high-voltage equipment are sufficiently high that high-voltage rectifier tubes may produce *X-radiation* which can constitute a health hazard unless such tubes are adequately shielded. Relatively simple shielding should prove adequate, but the need for this precaution should be considered in equipment design.

